

Questions and Answers: 2010 Grasshopper Season

Q. Why does the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) expect large grasshopper outbreaks in 2010?

A. APHIS' prediction of heavy outbreaks this year in some Western States is based on the unusually high population of adult grasshoppers in these States at the end of the summer of 2009, indicating that a large number of eggs may have been laid. If the spring is relatively warm with little rainfall, conditions could be favorable for egg hatching, grasshopper survival, and outbreak-level populations. However, relatively cool and wet weather could limit the potential for outbreaks.

Q. Which States are expected to have the heaviest outbreaks?

A. The States that could see the heaviest outbreaks are Montana, Nebraska, North Dakota, South Dakota, and Wyoming. States with less severe outbreaks could include Idaho, Nevada, and Utah.

Q. When will the outbreaks occur?

A. In the States predicted to have the largest outbreaks, they could begin as early as May, when the grasshoppers hatch, and continue throughout the summer.

Q. What is APHIS doing to prepare for and respond to the outbreaks?

A. APHIS stands ready to respond to outbreaks through its Grasshopper and Mormon Cricket Suppression Program, which has four components:

- Surveying 17 Western States (Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming) to determine the level of pest threat in specific areas;
- Providing technical assistance to cooperators at all levels;
- Supporting treatment efforts when necessary with available funding; and,
- Conducting education and outreach activities.

APHIS began planning survey and suppression efforts for fiscal year 2010 at the end of last year's grasshopper season. However, the extent of the 2010

outbreaks will not be known until APHIS conducts grasshopper surveys when the eggs hatch and the young grasshoppers begin to mature. APHIS' response strategy will largely be driven by this survey data.

Surveys in Arizona and New Mexico began in April, and large-scale outbreaks are not expected in either State. Surveys in States with the highest likelihood of outbreaks (Montana, Nebraska, North Dakota, South Dakota, and Wyoming) will begin in May, when grasshopper hatching begins. As the grasshopper season progresses, APHIS will post information about outbreaks and the agency's response activities online at www.aphis.usda.gov.

Over the years, APHIS' grasshopper program has built a broad coalition with its stakeholders, which includes Federal and State agencies, universities, and private landowners. Over the last few months, APHIS has been conducting public meetings to inform landowners about the grasshopper forecast. In preparing for the potential outbreaks, APHIS is also working very closely with State departments of agriculture, and many county weed and pest districts and extension agents are actively engaged with APHIS officials. Together, APHIS and its partners are laying a foundation for effective information sharing and a rapid response should widespread outbreaks occur.

Q. What should livestock producers do to prepare for the 2010 grasshopper season?

A. County extension agents are an excellent source of information regarding local conditions and should be the first line of contact. Ranchers can work directly with their agents (or weed and pest district directors in some States) to determine whether areas within their lands have high densities of egg beds—known as “hot spots”—that should be treated early. In addition, landowners can contact APHIS' Plant Protection and Quarantine (PPQ) program office in their State if they require additional information. Contact information for PPQ State offices can be found online at http://www.aphis.usda.gov/services/report_pest_disease/report_pest_disease.shtml.

Q. How can private landowners request treatment assistance from APHIS?

A. Treatment must be requested by a Federal land management agency, State agriculture department, county or local government, private group, and/or individual that has jurisdiction over the land before APHIS can consider treatment. County extension agents can assist in this process. After receiving a

request, APHIS officials would visit the site and assess various factors relevant to the infestation to determine whether action by APHIS is warranted. These factors include, but are not limited to, the pest species, biological stage of the species, timing of the treatment, treatment and chemical options, cost benefits of conducting the action, and ecological considerations.

Q. How much funding will APHIS contribute to rangeland treatments?

A. The Grasshopper and Mormon Cricket Program operates on a cost-share basis in accordance with available funding. APHIS pays for the full cost of conducting treatments on Federal lands, 50 percent of the cost on State lands, and one-third of the cost on privately owned lands. Some States may also contribute to the treatment of privately owned land.

Q. What kind of treatments would APHIS apply to rangeland?

A. APHIS' preferred treatment method is the use of diflubenzuron, an insecticide that inhibits the growth of the outer skeleton of immature grasshoppers and kills them before they reach adulthood. Diflubenzuron would be applied once aerially in most cases but can also be applied using ground-based methods.

It takes a few weeks for diflubenzuron to kill immature grasshoppers. Because diflubenzuron kills grasshoppers before they are mature enough to lay eggs, treatments applied one year often protect rangeland from outbreaks the following year. Carbaryl and malathion could also be used if conditions warrant.

Q. What effect can grasshopper outbreaks have on rangeland?

A. While grasshoppers are natural components of the rangeland ecosystem, their populations can reach outbreak levels and cause serious economic losses, especially when accompanied by a drought. Grasshopper outbreaks on rangeland impact ranchers and livestock producers in rural areas of the Western United States. These outbreaks may destroy 80 percent or more of the forage in areas as large as 2,000 square miles, forcing producers to purchase hay and other feed much earlier than in most years. In response, some producers may sell their livestock early or cease grazing altogether.

Both rangeland forage and cultivated crops can be destroyed by grasshoppers; the damage depends on where the grasshopper populations originate and where the grasshoppers move to. Many grasshopper outbreaks that originate on rangeland can move into and destroy crops such as alfalfa, wheat, barley, and corn.

Q. Where can I find more information about APHIS' Grasshopper and Mormon Cricket Suppression Program?

A. You can learn more about the program on APHIS' Web site at http://www.aphis.usda.gov/plant_health/plant_pest_info/grasshopper/index.shtml.

Q. If I have additional questions, whom should I contact?

A. Please e-mail your questions to grasshopper-program@aphis.usda.gov.

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